m-EI CHROMOGENIC AGAR BASE, MODIFIED

CAT Nº: 2050 For the isolation and differentiation of *Enterococcus faecalis* and *E. faecium*

FORMULA IN g/l

Yeast Extract	30.00	Chromogenic Mix	0.20
Sodium Chloride	15.00	Sodium Azide	0.15
Peptone	10.00	Cycloheximide	0.05
Esculine	1.00	Bacteriological Agar	15.00

Final pH 7.1 ± 0.2 at 25ºC

PREPARATION

Suspend 71.48 grams of the medium in one liter of distilled water. Mix well and dissolve by heating with frequent agitation. Boil for one minute until complete dissolution. Sterilize in autoclave at 121ºC for 15 minutes. Cool to 50ºC, mix well and dispense into plates. For a more selective medium, prepare a solution of 0.24 grams of nalidixic acid in 5 ml of sterile distilled water with a few drops of sodium hydroxide 0.1N (for a better dissolution), and aseptically add to one liter of medium. The prepared medium should be stored at 8-15°C. The color is amber, slightly opalescent.

The dehydrated medium should be homogeneous, free-flowing and beige in color. If there are any physical changes, discard the medium.

Caution: This medium contains Sodium azide and Cycloheximide and it is very toxic if swallowed, inhaled or comes into contact with skin. Wear gloves and eye face protection.

USES

m-EI CHROMOGENIC AGAR BASE, MODIFIED is recommended for the isolation and differentiation of *Enterococcus faecium* and *Enterococcus faecalis.*

This medium is a modification of the mEI cromogenic Agar base, where another chromogenic substrate is added. This addition allows the differentiation of *Enterococcus faecium* and *Enterococcus faecalis.*

Peptone provides nitrogen, vitamins, minerals and amino acids essential for growth. Yeast extract provides trace elements, vitamins and amino acids. Esculin is hydrolyzed by enterococci to form esculetin and dextrose. Cycloheximide inhibits most fungi, and the sodium azide inhibits Gram negative bacteria. Chromogenic Mix is added to differentiate *Enterococcus faecium* from *Enterococcus faecalis.* Bacteriological agar is the solidifying agent.

Inoculate and incubate to 41±0.5 °C and observe alter 18-24 hours. *Enterococcus faecium* will grow as blue-greenish, *Enterococcus faecalis* will grow as intense blue colonies.

MICROBIOLOGICAL TEST

The following results were obtained in the performance of the medium from type cultures, with the nalidixic acid added, after incubation at a temperature of 41 ± 0.5°C and observed alter 24-48 hours.

Microorganisms	Growth	Colony Color
Enterococcus faecium ATCC 9790	Good	Blue-greenish
Enterococcus faecalis ATCC 19433	Good	Intense blue
Escherichia coli ATCC 25922	Inhibited	-

BIBLIOGRAPHY

Levin, Fischer and Cabelli. 1975. Appl. Microbiol. *30.66.*
U.S. Environmental Protection Agency. 2002. Method 1600: Enterococci in water by membrane filtration using membrane enterococcus indoxyl –D- glucoside agar (mEI]. Publication EPA-821- R-02-022. USEPA Office of Water, Office of Science and Technology, USEPA, Washington, DC.

STORAGE

Once opened keep powdered medium closed to avoid hydration.